

ANNUAL REPORT OF VIOLATIONS OF THE FEDERAL SAFE DRINKING WATER ACT

January 1, 2000 through December 31, 2000



Tennessee Department of Environment and Conservation
Division of Water Supply
July 2001

This report was prepared in accordance with the requirements of Section 1414.(c)(3)(A) of the Federal Safe Drinking Water Act and covers violations that occurred during the period from January 1, 2000 through December 31, 2000. Copies of this report are located and available for review in each of the following locations:

Division of Water Supply - Central Office
401 Church Street
6th Floor, L&C Tower
Nashville, TN 37243-1549
615-532-0191

Regional Environmental Assistance Centers (EAC)- Division of Water Supply
1-888-891-8332

Chattanooga EAC
Division of Water Supply
Suite 550 - State Office Bldg.
540 McCallie Avenue
Chattanooga, TN 37402-2013
1-888-891-8332

Knoxville EAC
Division of Water Supply
Suite 220 - State Plaza
2700 Middlebrook Pike
Knoxville, TN 37219
1-888-891-8332

Columbia EAC
Division of Water Supply
2484 Park Plus Dr.
Columbia, TN 38401
1-888-891-8332

Nashville EAC
Division of Water Supply
711 R. S. Gass Blvd.
Nashville, TN 37216
1-888-891-8332

Cookeville EAC
Division of Water Supply
121 South Willow
Cookeville, TN 38502
1-888-891-8332

Jackson EAC
Division of Water Supply
362 Carriage House Dr.
Jackson, TN 38305-2222
1-888-891-8332

Johnson City EAC
Division of Water Supply
2305 Silverdale Rd.
Johnson City, TN 37601-2162
1-888-891-8332

Copies of the report are also located in most public libraries in the state and on the Department's Web site at:
<http://www.state.tn.us/environment/dws/index.html>

SUMMARY

This report is provided in compliance with the requirements of the 1996 Amendments of the Federal Safe Drinking Water Act. Included in this report is both a summary of drinking water violations and detailed information on systems with a violation during 2000.

The majority of the water systems and operators in Tennessee are very conscientious about the quality of water provided to their customers. Many of the violations were monitoring violations caused by an oversight

on the part of the water utility. Included in this year's report are the systems that failed to deliver the Consumer Confidence Report within the required time frame.

The Department of Environment and Conservation, Division of Water Supply, has worked with water utility managers/owners and operators to address each of the violations included in this report. Enforcement action and compliance schedules were used to achieve compliance with the regulations when the water utility did not or could not return to compliance in a timely manner. The majority of the violations in this report were committed by small water systems for failure to meet the microbiological monitoring requirements or for failure to meet the microbiological maximum contaminant level for total coliform. The second largest group of violations was caused by those systems that failed to meet the nitrate monitoring requirement. With technical assistance and training, most of the systems were able to return to compliance.

The Division of Water Supply will continue to work with water utility managers/owners and operators to ensure compliance with the drinking water requirements. If you have questions concerning the information contained in this report, please contact your local water utility, the nearest Division of Water Supply Office in the Regional Environmental Assistance Center at 888-891-8332, or the central office of the Division of Water Supply at 615-532-0191.

**STATE OF TENNESSEE
ANNUAL REPORT
PUBLIC WATER SYSTEM VIOLATIONS**

The Federal Safe Drinking Water Act (SDWA) was enacted in 1974 in order to assure that the public is provided with safe drinking water. Pursuant to the Safe Drinking Water Act and Amendments to the Act, national limits or standards were established on contaminant levels in drinking water to ensure that the drinking water is safe for human consumption. Such standards are known and denoted as Maximum Contaminant Levels. Further, the Environmental Protection Agency (EPA) also establishes treatment techniques for certain contaminants that are difficult for laboratories to measure in lieu of maximum contaminant levels to control unacceptable levels of contaminants in water. For example, treatment techniques have been established for viruses, bacteria and turbidity. In addition, the EPA regulates how frequently public water systems must monitor their water for contaminants and report the monitoring results to the States or EPA. A public water system is required to monitor and verify that the levels of contaminants present in the water do not exceed the maximum contaminant level for that contaminant. If a public water system fails to monitor as required or fails to report monitoring results correctly, then a monitoring or reporting violation occurs. Generally, the larger the population served by a water system, the more frequent the monitoring and reporting requirements. Additionally, the EPA requires public water systems to notify the public when they have violated these regulations. The 1996 Amendments to the Safe Drinking Water Act require public notification to include a clear and understandable explanation of the nature of the violation, its potential adverse health effects, steps that the public water system is undertaking to correct the violation and the possibility of alternative water supplies during the violation.

The Safe Drinking Water Act applies to each of the fifty (50) States and allows States and Territories to seek EPA approval to administer their own Public Water System Supervision Programs. The authority to operate a Public Water System Supervision Program is called "Primacy". In order to receive primacy, States must meet certain requirements specified in the Safe Drinking Water Act and the regulations, including the adoption of drinking water regulations that are at least as stringent as the Federal regulations and a demonstration that they can enforce program requirements. The State of Tennessee received primacy in 1977 and assumes primary enforcement responsibility for public water systems operating under the Tennessee Safe Drinking Water Act. The Safe Drinking Water Act and the Tennessee Safe Drinking Water Act define a public water system as follows:

"Public water system" means a system for the provision of piped water for human consumption if such system serves fifteen (15) or more service connections or which regularly serves twenty-five (25) or more individuals daily at least sixty (60) days out of the year.

A "Public Water System", as defined above, is either a "community water system" or a "non-community water system". Community and non-community water systems are defined as follows:

"Community Water System" means a public water system that serves at least fifteen (15) service connections used by year-round residents. Examples are municipalities and utility districts.

"Non-Community Water System" means a public water system that is not a community water system. Examples include churches, industries and restaurants.

As previously stated, all public water systems must monitor their water for contaminants and report the monitoring results to the State or EPA. Due to Tennessee securing primacy from the EPA, all public water systems in Tennessee must monitor for contaminants and report monitoring results to the State of Tennessee. Primacy States, such as Tennessee, then submit data to the EPA Safe Drinking Water Information System (SDWIS) on a quarterly basis. Data submissions include public water system inventory statistics, the incidence of Maximum Contaminant Level, Major Monitoring, and Treatment Technique violations, and the enforcement actions initiated against violators.

In addition to the above quarterly data submittal to the EPA, Amendments of the Federal Safe Drinking Water Act, made in 1996, require States with primacy, such as Tennessee, to prepare and submit an annual report to EPA regarding public water system violations within the State in accordance with Section 1414(c)(3)(A)(i). Further, pursuant to 1414(c)(3)(A)(ii), States with primacy are required to publish and distribute summaries of their reports and advise citizens of locations where the full report is available for review. Upon receipt of reports, EPA will evaluate and summarize the States' reports in an annual national report, the first of which EPA made available to the public by July 1, 1998. Informational reports submitted to the public and EPA by Tennessee are required to encompass violations pertaining to (1) maximum contaminant levels, (2) treatment requirements, (3) variances and exemptions, and (4) monitoring requirements determined to be significant by the EPA after consultation with the State. However, the State of Tennessee does not utilize variances and/or exemptions with respect to primary drinking water regulations; therefore, such information will be absent from reporting submitted by the State of Tennessee.

The State of Tennessee, Department of Environment and Conservation, Division of Water Supply, currently possesses regulatory responsibility for approximately one thousand one hundred seventy-one (1,171) public water systems throughout the state. These public water systems serve an estimated population in excess of five million two hundred thirteen thousand (5,213,594) individuals. All public water systems must accomplish certain monitoring and reporting requirements; however, the frequency of such requirements are dependent upon, and established considering, factors indicative of each water system including: population size served by the system; population type served by the system; and, source water supply. Although monitoring and reporting frequencies vary, failure to achieve monitoring and/or reporting requirements cause violations to be incurred regardless of monitoring frequency.

To aid in the interpretation and understanding of reported data, the following definitions are offered in order to clarify the nature of violations which may be incurred and/or the contaminants being monitored:

“Ground water under the direct influence of surface water” means any water beneath the surface of the ground with (1) significant occurrence of insects or other macroorganisms, algae, or other large-diameter pathogens such as *Giardia lamblia*, or (2) significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions. Direct influence must be determined for individual sources in accordance with established criteria.

“Maximum Contaminant Level (MCL)” means the maximum permissible level of a contaminant in water which is delivered at the free flowing outlet of the ultimate user of a public water system, except in the case of turbidity where the maximum permissible level is measured at the point of entry into the distribution system. Contaminants added to the water under circumstances controlled by the user, except those resulting from corrosion of piping and plumbing caused by water quality, are excluded from this definition.

Organic Contaminants: Carbon based compounds, such as industrial solvents and pesticides. These contaminants generally gain access to water through runoff from cropland or discharge from factories.

Inorganic Contaminants: Non-carbon based compounds such as metals, nitrates, and asbestos. These contaminants are naturally occurring in some water but can gain access through farming practices, chemical manufacturing, and other human activities.

Treatment Technique: A water disinfection process or procedure that is required instead of an maximum contaminant level for contaminants which laboratories cannot adequately measure.

Surface Water Treatment Rule: Establishes criteria under which water systems supplied by surface water or ground water under the direct influence of surface water must provide filtration as a treatment technique.

Trihalomethanes: Disinfection by-products produced as a result of the interaction of disinfectant (chlorine) with naturally occurring organic material that may be present in the water.

Waiver: Permission or consent of the Division of Water Supply conveyed to a water supply system upon satisfactory completion of criteria established and necessary to obtain such waiver.

A summary report has been included which reveals a compilation of violations regarding each contaminant. In addition, narrative explanations and accompanying data tables are offered to reveal those public water systems that have incurred violations during the 2000 calendar year. The narrative explanations convey specific information regarding the contaminants monitored and/or violations incurred as well as guidance regarding the use and interpretation of the data tables.

On July 1, 2000, each community public water system was required to prepare and distribute a Consumer Confidence Report to customers served by the system. The report was required to contain information including the system's source of water, contaminants detected in the water, potential health effects information, mechanisms for customers to influence decisions made by the water system and any violations of drinking water standards that may have occurred. This report is to be prepared annually and must be made available to the water customer.

Tennessee Water Systems

Summary Violations Report

January 1, 2000 through December 31, 2000

**State of Tennessee
Volatile Organic Contaminants
Violations Summary Report for 2000**

SDWIS Codes	Volatile Organic Contaminants	MCL (MG/L) ¹	MCL Violations		Treatment Technique Violations		Significant Monitoring Violations	
			Number of Violations	Number of Systems	Number of Violations	Number of Systems	Number of Violations	Number of Systems
2977	1,1-Dichloroethylene	0.007	0	0			7	4
2981	1,1,1-Trichloroethane	0.2	0	0			7	4
2985	1,1,2-Trichloroethane	.005	0	0			7	4
2980	1,2-Dichloroethane	0.005	0	0			7	4
2983	1,2-Dichloropropane	0.005	0	0			7	4
2378	1,2,4-Trichlorobenzene	.07	0	0			7	4
2990	Benzene	0.005	0	0			7	4
2982	Carbon tetrachloride	0.005	0	0			7	4
2380	cis-1,2-Dichloroethylene	0.07	0	0			7	4
2964	Dichloromethane	0.005	0	0			7	4
2992	Ethylbenzene	0.7	0	0			7	4
2989	Monochlorobenzene	0.1	0	0			7	4
2968	o-Dichlorobenzene	0.6	0	0			7	4
2969	para-Dichlorobenzene	0.075	0	0			7	4
2996	Styrene	0.1	0	0			7	4
2987	Tetrachloroethylene	0.005	0	0			7	4
2991	Toluene	1	0	0			7	4
2979	trans-1,2-Dichloroethylene	0.1	0	0			7	4
2984	Trichloroethylene	0.005	0	0			7	4
2950	Total Trihalomethanes	.010	1	1			3	2
2976	Vinyl chloride	0.002	0	0			7	4
2955	Xylenes (total)	10	0	0			7	4
	Total Number of Violations		1		0		150	
	Number of Individual Systems in Violation			1		0		6
	Total Number of Individual Systems with VOC Violation					7		

1. VALUES ARE IN MILLIGRAMS PER LITER (MG/L), UNLESS OTHERWISE SPECIFIED.

State of Tennessee
Synthetic Organic Contaminants
Violations Summary Report for 2000

SDWIS Codes	Organic Contaminants	MCL (MG/L) ¹	MCL Violations		Treatment Technique Violations		Significant Monitoring Violations	
			Number of Violations	Number of Systems	Number of Violations	Number of Systems	Number of Violations	Number of Systems
2931	1,2-Dibromo-3-chloropropane (DBCP)	0.0002	0	0			0	0
2063	2,3,7,8-TCDD (Dioxin)	3x10 ⁻⁸	0	0			0	0
2110	2,4,5-TP	0.05	0	0			0	0
2105	2,4-D	0.07	0	0			0	0
2265	Acrylamide				0	0		
2051	Alachlor	0.002	0	0			1	1
2050	Atrazine	0.003	0	0			4	4
2306	Benzo[a]pyrene	0.0002	0	0			0	0
2046	Carbofuran	0.04	0	0			1	1
2959	Chlordane	0.002	0	0			0	0
2031	Dalapon	0.2	0	0			0	0
2035	Di(2-ethylhexyl)adipate	0.4	0	0			0	0
2039	Di(2-ethylhexyl)phthalate	0.006	0	0			0	0
2041	Dinoseb	0.007	0	0			0	0
2032	Diquat	0.02	0	0			0	0
2033	Endothall	0.1	0	0			0	0
2005	Endrin	0.002	0	0			0	0
2257	Epichlorohydrin				0	0		
2946	Ethylene dibromide	0.00005	0	0			0	0
2034	Glyphosate	0.7	0	0			0	0
2065	Heptachlor	0.0004	0	0			0	0
2067	Heptachlor epoxide	0.0002	0	0			0	0
2274	Hexachlorobenzene	0.001	0	0			0	0

**State of Tennessee
Synthetic Organic Contaminants
Violations Summary Report for 2000**

SDWIS Codes	Organic Contaminants	MCL (MG/L) ¹	MCL Violations		Treatment Technique Violations		Significant Monitoring Violations	
			Number of Violations	Number of Systems	Number of Violations	Number of Systems	Number of Violations	Number of Systems
2042	Hexachlorocyclopentadiene	0.05	0	0			0	0
2010	Lindane	0.0002	0	0			0	0
2015	Methoxychlor	0.04	0	0			0	0
2036	Oxamyl (Vydate)	0.2	0	0			0	0
2326	Pentachlorophenol	0.001	0	0			0	0
2040	Picloram	0.5	0	0			0	0
2383	Polychlorinated biphenyls	0.0005	0	0			0	0
2037	Simazine	0.004	0	0			1	1
2020	Toxaphene	0.003	0	0			0	0
	Total Number of Violations		0		0		7	
	Number of Individual Systems in Violation			0		0		4

1. VALUES ARE IN MILLIGRAMS PER LITER (MG/L), UNLESS OTHERWISE SPECIFIED.

**State of Tennessee
Inorganic Contaminants
Violations Summary Report for 2000**

SDWIS Codes	Inorganics	MCL (mg/L)	MCL Violations		Treatment Technique Violations		Significant Monitoring Violations	
			Number of Violations	Number of Systems	Number of Violations	Number of Systems	Number of Violations	Number of Systems
1074	Antimony	0.006	0	0			2	2
1005	Arsenic	0.05	0	0			1	1
1094	Asbestos	7 million Fibers/L > 10 microns long	0	0			1	1
1010	Barium	2	0	0			2	2
1075	Beryllium	0.004	0	0			2	2
1015	Cadmium	0.005	0	0			2	2
1020	Chromium	0.1	0	0			2	2
1024	Cyanide (as free cyanide)	0.2	0	0			2	2
1025	Fluoride	4.0	0	0			1	1
1035	Mercury	0.002	0	0			2	2
1040	Nitrate	10 (as Nitrogen)	0	0			30	28
1038	Total Nitrate and Nitrite	10 (as Nitrogen)	0	0			1	1
1041	Nitrite	1 (as Nitrogen)	0	0			1	1
1045	Selenium	0.05	0	0			2	2
1085	Thallium	0.002	0	0			2	2
	Total Number of Violations		0				53	
	Number of Individual Systems in Violation			0				29

1. VALUES ARE IN MILLIGRAMS PER LITER (MG/L), UNLESS OTHERWISE SPECIFIED.

**State of Tennessee
Radionuclides
Violations Summary Report for 2000**

SDWIS Codes	Radionuclides	MCL (mg/L)	MCL Violations		Treatment Technique Violations		Significant Monitoring Violations	
			Number of Violations	Number of Systems	Number of Violations	Number of Systems	Number of Violations	Number of Systems
4000	Gross alpha	15 pCi/L	0	0			9	8
4010	Radium-226 and radium-228	5 pCi/L	0	0			0	0
4101	Gross beta	4 mrem/yr	0	0			0	0
	Total Number of Violations		0				9	
	Number of Individual Systems in Violation			0				8

**State of Tennessee
Total Coliform Rule
Violations Summary Report for 2000**

SDWIS Codes	Total Coliform Rule	MCL (MG/L) ¹	MCL Violations		Treatment Technique Violations		Significant Monitoring Violations	
			Number of Violations	Number of Systems	Number of Violations	Number of Systems	Number of Violations	Number of Systems
21	MCL, Acute	Presence	10	9				
22	MCL, Non-Acute	Presence	57	44				
23,25	Routine Monitoring and Repeat Major						427	239
	Total Number of Violations		67				427	
	Number of Individual Systems with MCL Violations			52				
	Number of Individual Systems with Significant Monitoring Violations							239
	Number of Individual Systems with TCR Violations		263					

1. VALUES ARE IN MILLIGRAMS PER LITER (MG/L), UNLESS OTHERWISE SPECIFIED.

2. NUMBER OF MAJOR MONITORING VIOLATIONS FOR SANITARY SURVEY UNDER THE TOTAL COLIFORM RULE.

**State of Tennessee
Surface Water Treatment Rule
Violations Summary Report for 2000**

SDWIS Codes	Surface Water Treatment Rule	MCL (mg/L)	MCL Violations		Treatment Technique Violations		Significant Monitoring Violations		
			Number of Violations	Number of Systems	Number of Violations	Number of Systems	Number of Violations	Number of Systems	
Filtered systems									
36	Monitoring, routine/repeat						7	7	
41	Treatment techniques				16	13			
Unfiltered systems									
31	Monitoring, routine/repeat						0	0	
42	Failure to filter				24	5			
	Subtotal				40		7		
	Number of Individual Systems with Treatment Technique Violations					17			
	Number of Individual Systems with Significant Monitoring Violations							7	
	Number of Individual Systems with SWTR Violations		22						

**State of Tennessee
Lead and Copper Rule
Violations Summary Report for 2000**

SDWIS Codes	Lead and Copper Rule	MCL (MG/L) ¹	MCL Violations		Treatment Technique Violations		Significant Monitoring Violations	
			Number of Violations	Number of Systems	Number of Violations	Number of Systems	Number of Violations	Number of Systems
51	Initial lead and copper tap M/R						3	2
52	Follow-up or routine lead and copper tap M/R						0	0
	Total Number of Violations				0		3	
	Number of Individual Systems with Treatment Technique Violation					0		
	Number of Individual Systems with Significant Monitoring Violation							2
	Number of Individual Systems with Lead & Copper Rule Violation		2					

1. VALUES ARE IN MILLIGRAMS PER LITER (MG/L), UNLESS OTHERWISE SPECIFIED.

**State of Tennessee
Consumer Confidence Reports
Violations Summary Report for 2000**

SDWIS Codes	Consumer Confidence Report	Number of Violations	Number of Systems
71	Failure to Provide CCR	12	12
	Totals	12	12

MICROBIOLOGICAL DATA INTERPRETATION AND GUIDANCE

Microbiological contaminant sampling is conducted by all public water systems in Tennessee in an effort to detect any biological contaminants that may be present in drinking water. All community public water systems must conduct monitoring on a monthly basis with the number of samples being based on the population served. At a minimum, non-community water systems must monitor each calendar quarter. Non-community systems that serve more than one thousand (1,000) persons, utilize a ground water source under the direct influence of surface water or utilize surface water in total or in part must monitor on a monthly basis. A system collecting a sample that has a positive result for coliform bacteria must collect no fewer than three repeat samples for each positive result. All samples with a positive result for total coliforms must be analyzed for the presence of fecal coliforms. The results of all routine and repeat samples are included in determining compliance with the maximum contaminant level for total coliforms. The maximum contaminant level is based on the presence or absence of total coliforms in a sample.

If any repeat sample is fecal coliform-positive, or if any repeat sample is total coliform-positive following a fecal coliform-positive routine sample, an acute violation of the maximum contaminant level for microbiological contaminants is incurred. For systems which collect forty (40) or more samples per month, if greater than five (5) percent of samples collected yield total coliform-positive results a non-acute violation of the maximum contaminant level for microbiological contaminants is incurred. Further, for systems collecting fewer than forty (40) samples per month, if more than one (1) sample collected yields total coliform-positive results then a non-acute violation for microbiological contaminants is incurred.

Failure by a public water system to perform routine monitoring for microbiological contaminants constitutes a significant monitoring violation. Failure by a public water system to perform repeat monitoring following a positive coliform sample also constitutes a significant monitoring violation for microbiological contaminants.

With consideration of the above information, the following data reveals a number of public water systems in the State of Tennessee incurred a violation pertaining to microbiological contaminants. The data has been categorized in accordance with the type of violation incurred; Microbiological Maximum Contaminant Level Violations or Significant Monitoring Violations. The data is further subdivided dependent upon the monitoring frequency of the water systems. In referencing the data regarding microbiological maximum contaminant level violations, the public water systems which incurred such violations are listed according to sampling frequency and are accompanied by the county in which the system is located. The data charts reveal the monitoring period during which the violation occurred and whether the violation constituted an acute or non-acute violation of the maximum contaminant level. Acute violations of the maximum contaminant level are represented with dark shading while non-acute violations of the maximum contaminant level are represented utilizing light shading. See data tables 2 and 4.

The data charts documenting significant monitoring violations list public water systems according to sampling frequency and are also accompanied by the county in which the system is located. The data charts include shaded areas corresponding to the monitoring periods during which a monitoring violation was incurred. The failure to conduct routine monitoring or repeat monitoring is not differentiated as each constitutes a major monitoring failure and violation. See data tables 1 and 3

Table 1

**Bacteriological
Significant Monitoring Violations
Monthly Systems**

January 1, 2000 through December 31, 2000

■ Significant Monitoring

<u>System Name</u>	<u>County</u>	<u>Population</u>	January	February	March	April	May	June	July	August	September	October	November	December
* ACORN VILLAGE MHP	HUMPHREYS	38							■					
AMBERWOOD AT BELLEVUE APTS	DAVIDSON	531							■					
ANDERSON CO. PARK, PICNIC	ANDERSON	250										■		
AULT'S SNACK BAR	BLEDSON	25								■			■	
BATTLE CREEK CHEVRON W S	MARION	25	■	■						■				
BEECH CLIFF FREEWILL BAPTIST	CARTER	25	■											
BEECH SPRINGS BAPTIST CHURCH	POLK	60		■	■		■	■	■					■
BELL BUCKLE WATER SYSTEM	BEDFORD	1,502										■		
BIRCHWOOD APARTMENTS	RUTHERFORD	215				■								
BIRDSONG RESORT & MARINA	BENTON	30										■		
* BITSY FALLS TROUT FARM	STEWART	25				■								
BLUE WATER CAMPGROUND & BT DK	RHEA	30		■		■	■							
BRANDON SPRINGS-LBL	STEWART	75											■	
CAMBRIDGE OF HICKORY HOLLOW	DAVIDSON	850						■						
CAMP AHISTADI	JOHNSON	70				■								
CAMP CHEROKEE-MCMINN CO	MCMINN	110					■			■	■			
CAMP MARYMOUNT	WILLIAMSON	250								■				
CAMP SKY WA MO	SULLIVAN	86				■	■	■	■	■				
CARDERVIEW UTILITY DISTRICT	JOHNSON	549			■									
CARR'S COUNTY LINE GROCERY	BLEDSON	25	■		■		■	■						
* CEDAR CREEK HOME OWNERS ASSOC.	GREENE	98	■	■	■	■	■	■						■
CEDAR GROVE BAPTIST CHURCH	HUMPHREYS	90					■	■	■					
CEDAR HALL SCHOOL	RUTHERFORD	40				■	■	■						
CLARKSBURG UTILITY DISTRICT	CARROLL	1,325				■								
* CLAUDE COUNTRY VILLAGE MHP	DAVIDSON	109					■							
CLINCH SCHOOL	HAWKINS	172	■					■						
* COLD SPRINGS II WATER SYSTEM	JOHNSON	60	■	■	■	■	■							
COLLIERVILLE WATER DEPT	SHELBY	28,864			■									
COLLINWOOD WATER DEPT	WAYNE	2,109							■					
COLONIAL HARBOR WATER SYSTEM	BLOUNT	30		■	■				■				■	
CONASAUGA BAPTIST CHURCH	MCMINN	75	■			■			■		■	■		■
COUCH'S CAMPGROUND	SULLIVAN	25	■											
* COUNTRY VALLEY ESTATES	MADISON	50								■			■	
CRAZY HORSE PARK	WAYNE	25					■		■					
CREEKSIDE RESTAURANT	UNICOI	50	■				■							
CROOKED CREEK SPORTS MARINA	PERRY	25				■	■							
CUBA LANDING MARINA	HUMPHREYS	25										■		
DALE'S MARKET	WAYNE	25												■
DAYTON WATER DEPT	RHEA	16,851											■	
DEER POINT CAMPGROUND	PERRY	40				■								
DOCKSIDE FAMILY CAMPGROUND	SULLIVAN	50												

* Inactive Water System
TN DWS (May 2001)

**Bacteriological
Significant Monitoring Violations
Monthly Systems**

January 1, 2000 through December 31, 2000

 Significant Monitoring

<u>System Name</u>	<u>County</u>	<u>Population</u>	January	February	March	April	May	June	July	August	September	October	November	December
EAGLES REST WATER SYSTEM	STEWART	53												
EAST CHEROKEE ELEMENTARY SCHL	SULLIVAN	55												
EBENEZER BAPTIST CHURCH	BLEDSON	50												
ELK MILLS RESTAURANT	CARTER	25												
FAT DADDY'S MARINA	STEWART	25												
FATE SANDERS BOATDOCK	RUTHERFORD	40												
FISH SPRINGS	CARTER	100												
FISH SPRINGS RESTAURANT	CARTER	150												
FIVE POINTS BAPTIST CHURCH	LAWRENCE	50												
* FLAG POND MEDICAL CLINIC	UNICOI	50												
FLAT CREEK CO OP	BEDFORD	1,515												
FORT BLUFF YOUTH CAMP	RHEA	300												
FORT CAMPBELL WATER SYSTEM	MONTGOMERY	40,000												
FOX CAMP BAR AND GRILL	RUTHERFORD	25												
FRANKLIN ESTATES M H COMMUNITY	WILLIAMSON	740												
GOOD HOPE BAPTIST CHURCH	MEIGS	30												
GRASSHOPPER CREEK P.U.A.-TVA	HAMILTON	100												
GREEN GABLES MOTEL	HAMILTON	25												
GREENLAND PARK	HAWKINS	100												
HALES BAR MARINA	MARION	100												
HARTWOOD CAMPGROUND	SULLIVAN	120												
HIDDEN HOLLOW CAMP	PUTNAM	50												
HIDDEN VALLEY LAKES #2	HICKMAN	30												
HIDDEN VALLEY LAKES #5	HICKMAN	50												
HIDDEN VALLY MARKET	HICKMAN	25												
HOLLAND WATER SYSTEM	HUMPHREYS	25												
JAMESTOWN APARTMENTS	DAVIDSON	238												
KNOXVILLE EAST KOA	SEVIER	200												
KYLES FORD SCHOOL	HANCOCK	68												
LAKEFRONT FAMILY CAMPGROUND	SULLIVAN	50												
LAKEMONT U. D.	HAWKINS	111												
LAKESIDE CAMPGROUND	HAWKINS	35												
LAKEWOOD PARK #1	COFFEE	25												
LAKEWOOD PIZZA LOUNGE	COFFEE	25												
LEWIS TRAILER PARK	MADISON	110												
LIBERTY GROVE BAPTIST CHURCH	LAWRENCE	110												
LIBERTY HILL CHURCH OF CHRIST	MCMINN	95												
LOBELVILLE WATER DEPT	PERRY	1,382												
MAPLE VIEW PUA-TVA	MARION	50												
MASONS BOAT DOCK	HUMPHREYS	300												
* MELSON MOBILE HOME PARK	WAYNE	25												

* Inactive Water System
TN DWS (May 2001)

**Bacteriological
Significant Monitoring Violations
Monthly Systems**

January 1, 2000 through December 31, 2000

 Significant Monitoring

<u>System Name</u>	<u>County</u>	<u>Population</u>	January	February	March	April	May	June	July	August	September	October	November	December
MT ZION PENTECOSTEL HOLINESS	HUMPHREYS	50												
MULBERRY GAP SCHOOL	HANCOCK	84												
MUSICK'S LAKESIDE CAMPGROUND	SULLIVAN	55												
NEVA GENERAL STORE	JOHNSON	25												
NEW ZION BAPTIST CHURCH	MCMINN	100												
NEWPORT RESORT WATER SYSTEM	RHEA	123												
NORTH ELIZABETHTON WATER CO-OP	CARTER	1,213												
OAK GROVE BAPTIST CHURCH	MCMINN	65												
* OBSERVATION KNOB PARK-CAMPGRD	SULLIVAN	100												
OCOEE ADVENTURE CENTER	POLK	25												
OWENS LAKEVIEW CAMPGROUND	SULLIVAN	120												
PAILO MARKET	BLEDSE	25												
PAINTER CREEK MHP	SULLIVAN	25												
* PARKSIDE MANOR APARTMENTS	HAMILTON	100												
* PATE'S FORD MARINA	DE KALB	30												
PETERS' HOLLOW WATER SYSTEM	CARTER	132												
* PICKETT STATE PARK-GROUP CAMP	PICKETT	75												
PIONEER LANDING	JOHNSON	350												
POLO PARK AT JACKSON DOWNS APT	DAVIDSON	911												
PONCHO'S PLACE	HUMPHREYS	25												
POND HILL BAPTIST CHURCH	MCMINN	150												
RAINTREE VILLAGE APARTMENTS	DAVIDSON	127												
RIVERFRONT CAMPGROUND	PERRY	40												
RIVERSIDE CATFISH HOUSE	MARION	30												
ROAN MOUNTAIN UTILITY DISTRICT	CARTER	795												
S & S GENERAL STORE	JOHNSON	30												
SANDY'S MARKET	RUTHERFORD	25												
SELMER WATER SYSTEM	MCNAIRY	16,802												
SHADY GROVE HARBOR MARINA	HAMILTON	30												
SHADY SPRINGS BAPTIST CHURCH	POLK	100												
SHADY VALLEY COUNTRY STORE	JOHNSON	25												
SHENANDOAH RANCH	POLK	36												
SHORT MOUNTAIN BIBLE CAMP	CANNON	130												
SOUTH BRISTOL-WEAVER PIKE U D	SULLIVAN	4,933												
SOUTHWEST WAYNE COUNTY UD	WAYNE	111												
SPRING VILLAGE MHP	JEFFERSON	86												
* SUCK CREEK BAPTIST CHURCH	HAMILTON	30												
SUNSHINE TRAVEL CENTER	JEFFERSON	100												
* SWAN VIEW MKT,RESTAURANT&MOTE	LEWIS	137												

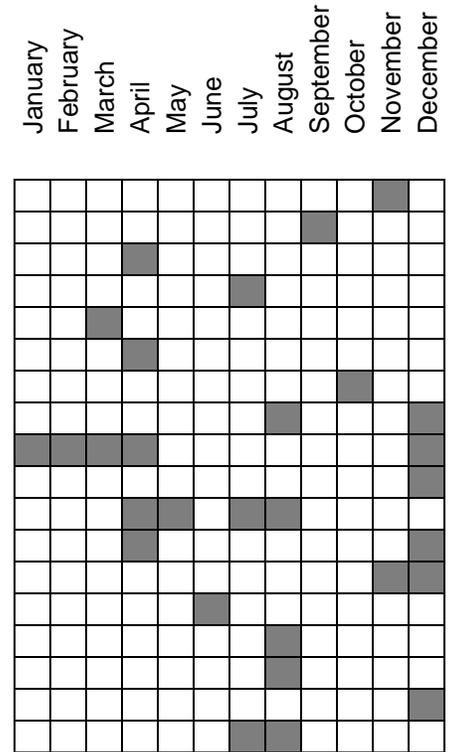
* Inactive Water System
TN DWS (May 2001)

**Bacteriological
Significant Monitoring Violations
Monthly Systems**

January 1, 2000 through December 31, 2000

■ Significant Monitoring

<u>System Name</u>	<u>County</u>	<u>Population</u>
TELLICO RANGER STATION USFS	MONROE	25
TENNESSEE FITNESS SPA	WAYNE	25
TENNESSEE HILLS CAMP GROUND	COFFEE	70
THE COUNTRY PLACE MINISTRIES	FAYETTE	60
THE OAKS FAMILY CONFERENCE CTR	GREENE	100
* THE SUNSET TRUST	FRANKLIN	40
THREE OAKS RESTAURANT	HENRY	25
* TIPTON'S RESTAURANT	UNICOI	30
TN CUMBERLAND PLATEAU CAMPGRD	BLEDSON	96
TOMMY'S MARKET	PERRY	25
TREASURE ISLAND FAMILY RESTAUR	SULLIVAN	50
WALNUT GROVE BAPTIST CHURCH	MEIGS	60
WATERBURY APARTMENTS	MONTGOMERY	147
WATERFORD LANDING APARTMENTS	DAVIDSON	434
WHIPPOORWILL FARM DAY CAMP	WILLIAMSON	150
WHITE HOUSE UTILITY DISTRICT	SUMNER	57,137
WILDWOOD ESTATES	HUMPHREYS	64
WOODLAND COVE CAMPGROUND	SULLIVAN	100
Total Systems		139
Total Population		187,554
Total Violations		280



* Inactive Water System
TN DWS (May 2001)

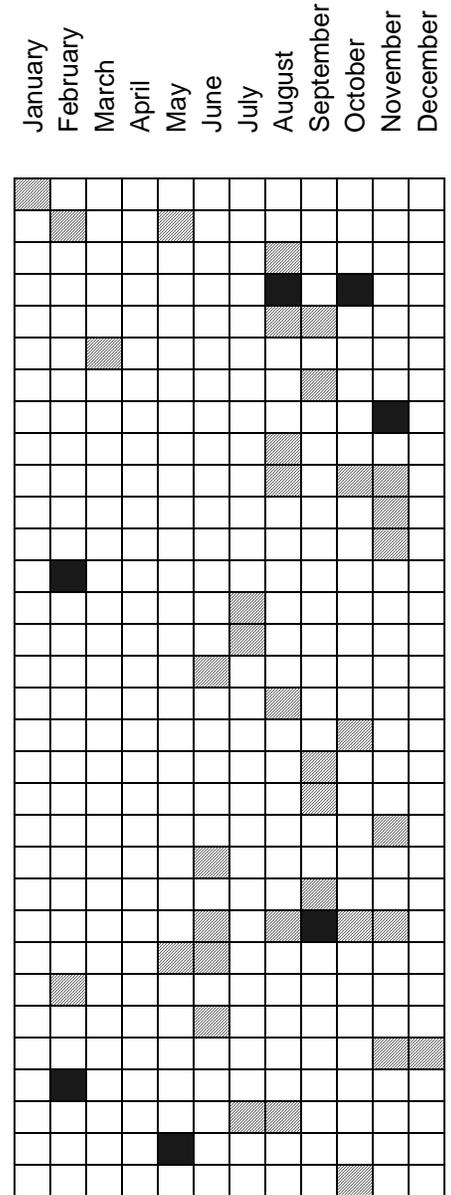
Table 2

**Bacteriological
Maximum Contaminant Level Violations
Monthly Systems**

January 1, 2000 through December 31, 2000

■ Acute MCL Violation
▨ Non-Acute MCL Violation

<u>System Name</u>	<u>County</u>	<u>Population</u>
ALLEN DALE DRIVE MHP	BLOUNT	90
BLUE WATER CAMPGROUND & BT DK	RHEA	30
BRISTOL-BLUFF CITY UTILITY DIS	SULLIVAN	4,370
CARR'S COUNTY LINE GROCERY	BLEDSON	25
CLARKSBURG UTILITY DISTRICT	CARROLL	1,325
COLD SPRINGS UTILITY DISTRICT	JOHNSON	549
* COUNTRY VALLEY ESTATES	MADISON	50
COUNTY LINE TRAILER PARK	GIBSON	74
COVINGTON WATER DEPT	TIPTON	10,150
DALE'S MARKET	WAYNE	25
DAYTON WATER DEPT	RHEA	16,851
DECALOGUE STONE COUNTRY WAT SY	STEWART	150
FATE SANDERS BOATDOCK	RUTHERFORD	40
FENTRESS COUNTY U.D.	FENTRESS	9,076
GIBSON CO MUN WATER DIST #2	GIBSON	1,133
HARTSVILLE WATER DEPT	TROUSDALE	6,141
HENRY WATER SYSTEM	HENRY	547
HOLSTON RIVER BEND UTILITY DIS	GRAINGER	40
LA FOLLETTE WATER DEPT	CAMPBELL	21,730
LEWIS TRAILER PARK	MADISON	110
LIBERTY GROVE BAPTIST CHURCH	LAWRENCE	110
NEW MARKET UTILITY DISTRICT	JEFFERSON	3,478
ONEIDA W&S COMM	SCOTT	10,016
PAILO MARKET	BLEDSON	25
* PATE'S FORD MARINA	DE KALB	60
RICEVILLE UTILITY DISTRICT	MCMINN	2,114
SANDY'S MARKET	RUTHERFORD	25
TN CUMBERLAND PLATEAU CAMPGRD	BLEDSON	96
USA RAFT INC.	UNICOI	25
WHITEWATER CANTINA	POLK	50
WILDWOOD ESTATES	HUMPHREYS	64
WINCHESTER WATER SYSTEM	FRANKLIN	16,104
Total Systems		32
Total Population		104,673
Total Violations		44



* Inactive Water System
TN DWS (May 2001)

Table 3

**Bacteriological
Significant Monitoring Violations
Quarterly Systems**

January 1, 2000 through December 31, 2000

■ Significant Monitoring

<u>System Name</u>	<u>County</u>	<u>Population</u>	January February March	April May June	July August September	October November December
BETHEL CHURCH OF CHRIST	BLED SOE	30				
BETHLEHEM BAPTIST CHURCH	MADISON	30				
BRITTON FORD CAMPGROUND	HENRY	25				
C J PAPA DOPS RESTAURANT	COCKE	25				
* CARD'NAL COVE RESTAURANT	GRAINGER	25				
CARROLL LAKE COUNTRY CLUB, INC	CARROLL	100				
CHEROKEE MARKET & DELI	GRAINGER	25				
CONASAUGA BAPTIST CHURCH	MCMINN	75				
COORS BREWING COMPANY	SHELBY	476				
COVINGTON MUNICIPAL AIRPORT	TIPTON	200				
CRENSHAW'S RESTAURANT	GIBSON	25				
CROWN INN	JEFFERSON	50				
CUBA LANDING MARINA	HUMPHREYS	25				
DEL RIO SCHOOL	COCKE	170				
ECONO LODGE	MADISON	400				
FAIRVIEW BAPTIST CHURCH	POLK	100				
FAMILY TRAVEL MART	HAYWOOD	150				
FISH SPRINGS RESTAURANT	CARTER	150				
FRENCH BROAD BAPTIST CHURCH	JEFFERSON	40				
FRIENDSHIP BAPTIST ST CHURCH	MADISON	245				
FUEL MART # 628	HAYWOOD	300				
FUTURE'S GOLF CLUB	HENRY	500				
GERMAN CRK DOCK/CMP/RST	GRAINGER	100				
GILES FLEA MARKET	CLAIBORNE	25				
GILMORE'S RESTAURANT	GRAINGER	25				
GLENWOOD CHURCH OF CHRIST	HUMPHREYS	55				
GOOD TIME CHARLIE'S WATER SYS.	HUMPHREYS	25				
HIDDEN VALLEY LAKES #1	HICKMAN	50				
HIDDEN VALLEY LAKES #3	HICKMAN	35				
HIDDEN VALLEY LAKES #4	HICKMAN	33				
* HIGHWAY TO HEAVEN CHURCH	MONROE	25				
HONEYMOON HILLS OF GATLINBURG	SEVIER	50				
HOOPERS I-40 EXXON	HAYWOOD	125				
HOPPIN' ROBBINS DONUTS	BENTON	25				

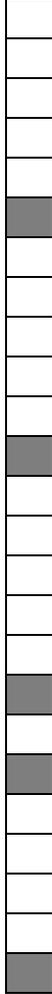
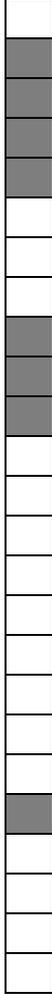
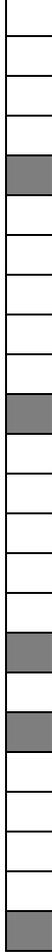
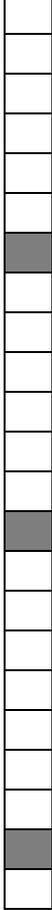
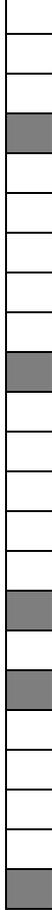
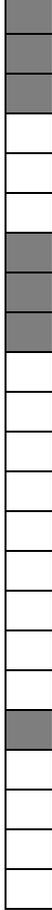
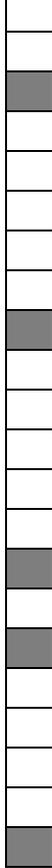
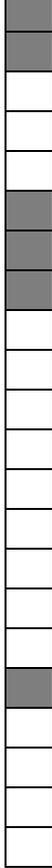
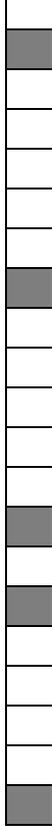
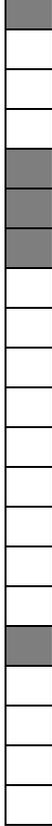
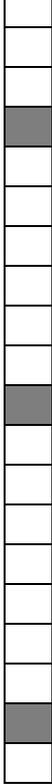
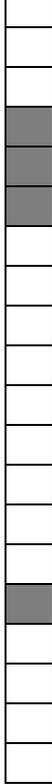
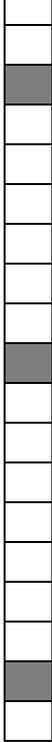
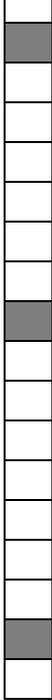
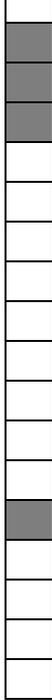
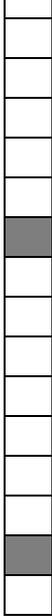
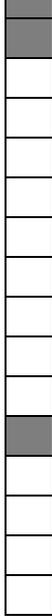
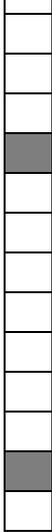
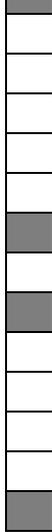
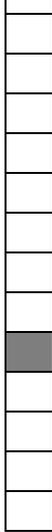
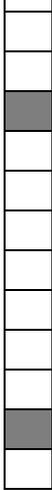
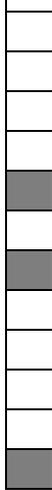
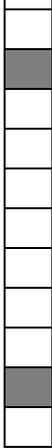
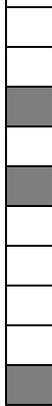
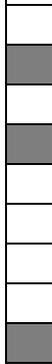
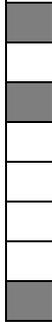
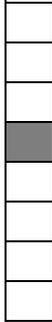
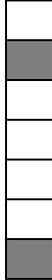
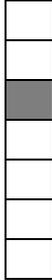
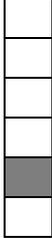
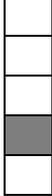
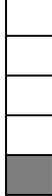
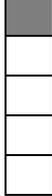
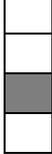
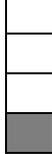
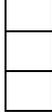
* Inactive Water System
TN DWS (May 2001)

Table 3

**Bacteriological
Significant Monitoring Violations
Quarterly Systems**

January 1, 2000 through December 31, 2000

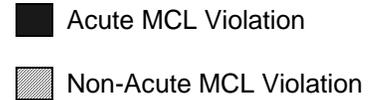
 Significant Monitoring

<u>System Name</u>	<u>County</u>	<u>Population</u>	January February March	April May June	July August September	October November December
KAMP KIWANI	HARDEMAN	200				
KENTUCKY LAKE MARKET	STEWART	25				
LAKEWOOD PARK #2	COFFEE	25				
LIL' PONDEROSA CAMPGROUND	SEVIER	100				
LONG'S STORE	COFFEE	25				
MAR-TENN COUNTRY HAM	WEAKLEY	25				
MOUNTAIN RIDGE GOLF CLUB	CUMBERLAND	30				
MT HARMONY BAPTIST CHURCH	MCMINN	90				
* MUDDY CREEK MARKET	JEFFERSON	50				
NEW HARMONY BAPTIST CHURCH	HENRY	25				
OAK GROVE CHURCH OF CHRIST	CHESTER	120				
PINE HILL CH OF THE NAZARENE	HUMPHREYS	25				
RAFTING IN THE SMOKIES	POLK	50				
RASAR LANDING	MONROE	100				
ROAN MTN ST PK-VISITOR CENTER	CARTER	60				
ROCK CREEK CAMP-US FOREST SERV	UNICOI	190				
* SPIVEY COVE CAMPGROUND USFS	MONROE	25				
STATE LINE BEVERAGE	JOHNSON	70				
SUNSET GAP COMMUNITY	COCKE	50				
TANASI GIRL SCOUT CAMP	UNION	200				
TED-DEE'S CATFISH CAFE & MKT	CARROLL	25				
THE BOAT DOCK	HARDEMAN	25				
THE OAKS FAMILY CONFERENCE CTR	GREENE	100				
TINY'S MOBILE HOME PARK	HENRY	25				
UNITY BAPTIST CHURCH	CHESTER	77				
* UPPER NORRIS CONSERVATION CLUB	CLAIBORNE	25				
WOFFORD AND YOUNG'S T.P.	HENRY	25				
Total Systems		61				
Total Population		5,526				
Total Violations		77				

* Inactive Water System
TN DWS (May 2001)

**Bacteriological
Significant Monitoring Violations
Quarterly Systems**

January 1, 2000 through December 31, 2000



<u>System Name</u>	<u>County</u>	<u>Population</u>	January February March	April May June	July August September	October November December
BIRDSONG RESORT & MARINA	BENTON	30				
BRITTON FORD CAMPGROUND	HENRY	25				
BROOKSIE'S BARN	MADISON	25				
CHATTANOOGA NORTH KOA CAMPGR	BRADLEY	140				
COUCH'S CAMPGROUND	SULLIVAN	25				
CUBA LANDING MARINA	HUMPHREYS	25				
FOX DEN CAMPGROUND	COCKE	100				
HOLLAND WATER SYSTEM	HUMPHREYS	25				
JACKS CREEK ELEMENTARY SCHOOL	CHESTER	160				
LUTTS VOL. FIRE DEPT. W.S.	WAYNE	25				
MILLROCK FREEWILL BAPTIST CH	WAYNE	100				
MT VERNON BAPTIST CHURCH	HAMILTON	100				
OAK GROVE CHURCH OF CHRIST	CHESTER	120				
P J'S RESTAURANT	STEWART	30				
PALMERSVILLE HIGH SCHOOL	WEAKLEY	280				
RAFTING IN THE SMOKIES	POLK	50				
* SPIVEY COVE CAMPGROUND USFS	MONROE	25				
THE COUNTRY PLACE MINISTRIES	FAYETTE	60				
WATERS EDGE R V PARK	SULLIVAN	25				
WHITEWAY GRILL	CARTER	25				
Total Systems		20				
Total Population		1,395				
Total Violations		22				

* Inactive Water System
TN DWS (May 2001)

TREATMENT TECHNIQUE VIOLATIONS DATA INTERPRETATION AND GUIDANCE

Treatment techniques are water treatment processes employed for the treatment and/or removal of contaminants in lieu of establishing a Maximum Contaminant Level for contaminants which laboratories cannot adequately measure. The Surface Water Treatment Rule utilizes and establishes treatment techniques in lieu of maximum contaminant levels for *Giardia lamblia*, viruses, heterotrophic plate count bacteria, *Legionella*, and turbidity. In accordance with such requirements, water systems supplied by surface water, or ground water sources under the direct influence of surface water, must utilize water treatment processes (filtration and disinfection) which will achieve removal and/or inactivation of *Giardia lamblia* cysts and viruses. Water systems must perform analyses of the water in order to ensure the proper operation and effectiveness of the filtration and disinfection treatment.

In accordance with the Surface Water Treatment Rule, water systems must monitor the water for turbidity (cloudiness of the water) and disinfectant residual. If a water system fails to conduct required monitoring, or fails to monitor and report less than ninety (90) percent of the required samples, as determined by population served and duration of water plant operation, then a significant monitoring violation is incurred. If a water system conducts required monitoring and reporting and the results reveal that less than ninety-five (95) percent of samples collected met the turbidity standard or disinfectant residual standard, then a treatment technique violation is incurred. Additionally, if a water system utilizing surface water or ground water under the direct influence of surface water fails to meet all criteria to avoid filtration treatment and does not install the necessary filtration treatment within the allowable eighteen (18) month deadline then a violation is incurred regarding the failure to filter requirement.

The following data reveals public water systems within the State of Tennessee which have incurred treatment technique violations as described above. The data has been categorized according to the type of violation incurred. Water systems which failed to conduct required monitoring or reporting or conducted less than ninety (90) percent of the required monitoring incurred a significant monitoring violation and are revealed, together with the county of location, in the significant monitoring violation Data Table 5. Shading during that period represents the compliance period(s) during which the violation was incurred. Water systems that performed the required monitoring but failed to achieve compliance with the standard for turbidity or disinfectant residual incurred a treatment technique violation and are revealed on the corresponding Data Table 6. Shading during that period represents the compliance period(s) during which the violation was incurred. Water systems which failed to install filtration treatment within the allowable eighteen (18) months for installation incurred a violation regarding failure to filter and are revealed on the corresponding Data Table 7. Shading during that period represents the compliance period(s) during which the violation was incurred.

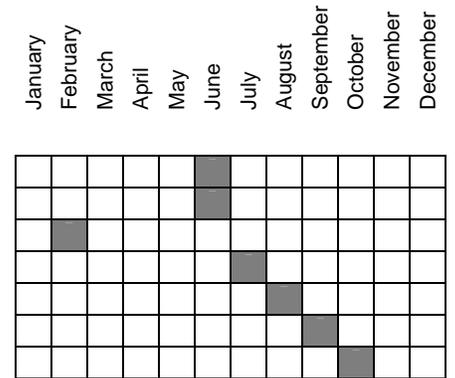
Table 5

Surface Water Treatment Rule
Significant Monitoring Violations

January 1, 2000 through December 31, 2000

■ Significant Monitoring Violation

<u>System Name</u>	<u>County</u>	<u>Population</u>
BYRDSTOWN WATER DEPT.	PICKETT	3,984
COLLINWOOD WATER DEPT.	WAYNE	2,109
DICKSON WATER DEPT.	DICKSON	12,336
BANE BERRY U.D.	JEFFERSON	464
LUTTRELL-BLAINE-CORRYTON U.D.	UNION	5,703
NORTH DECATUR CO. U.D.	DECATUR	2,428
NATCHEZ TRACE YOUTH ACADEMY	HUMPHREYS	45
Total Systems		7
Total Population		27,069
Total Violations		7



* Inactive Water System
TN DWS (May 2001)

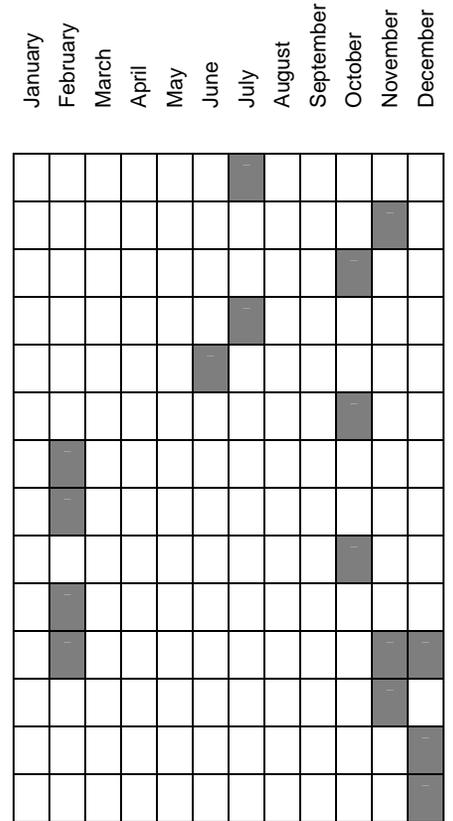
Table 6

Surface Water Treatment Rule
Treatment Technique Violations

January 1, 2000 through December 31, 2000

 Treatment Technique Violation

<u>System Name</u>	<u>County</u>	<u>Population</u>
BANEBERRY U. D.	JEFFERSON	464
BAYS MOUNTAIN MOBILE HOME PARK	BLOUNT	90
BLUFF CITY WATER DEPARTMENT	SULLIVAN	2,214
BYRDSTOWN WATER DEPT	PICKETT	3,984
COLLINWOOD WATER DEPT	WAYNE	2,109
FIRST U.D. OF HARDIN COUNTY	HARDIN	5,171
JASPER WATER DEPT	MARION	8,544
MARYVILLE DEPT OF WAT QUAL CON	BLOUNT	30,153
OLIN CORPORATION	BRADLEY	750
PARSONS WATER DEPARTMENT	DECATUR	4,198
PASMINCO ZINC WATER SYSTEM	MONTGOMERY	500
PIKEVILLE WATER SYSTEM	BLEDSON	3,398
RED BOILING SPRINGS W.S. Entry Point A	MACON	3,855
Entry Point C		
Total Systems		13
Total Population		65,430
Total Violations		16



* Inactive Water System
TN DWS (May 2001)

Table 7

**Surface Water Treatment Rule
Failure to Filter Violations**

January 1, 2000 through December 31, 2000

 Failure to Filter Violation

<u>System Name</u>	<u>County</u>	<u>Population</u>	January	February	March	April	May	June	July	August	September	October	November	December
COLLINWOOD WATER DEPT ⁽¹⁾	WAYNE	1,889												
ESTILL SPRINGS WATER DEPARTMENT ⁽²⁾	FRANKLIN	3,366												
HICKORY STAR MARINA	UNION	135												
LAKESIDE CAMPGROUND	HAWKINS	35												
POND HILL BAPTIST CHURCH ⁽³⁾	MCMINN	150												
	Total Systems	5												
	Total Population	5,575												
	Total Violations	24												

Notes:

- (1) Filtration installed by June 1, 2000
- (2) Filtration installed by June 1, 2000
- (3) Filtration installed by March 1, 2000

INORGANIC CONTAMINANTS VIOLATIONS DATA INTERPRETATION AND GUIDANCE

Inorganic contaminant sampling is conducted by all public water systems in Tennessee in an effort to detect inorganic contaminants such as metals, nitrates or asbestos that may be present in the drinking water. Maximum contaminant levels have been established for inorganic contaminants and monitoring determines compliance with such standards. Monitoring intervals for inorganic contaminants are determined considering the type of source water utilized by the public water system with the exceptions of nitrate and asbestos. Monitoring to determine compliance with the maximum contaminant level for nitrate may be conducted no less frequently than annually. Monitoring to determine compliance with the maximum contaminant level for asbestos is conducted with consideration to population served and the vulnerability of the system to asbestos contamination (asbestos-cement piping, etc.).

The accompanying data reveals those public water systems within the State of Tennessee which have incurred a violation pertaining to inorganic contaminants. The data reveals water systems that failed to conduct required monitoring. In referencing the data, Data Table 8 lists all inorganic contaminants that require monitoring with the exception of Nitrate. The public water systems that have incurred monitoring violations are listed accompanied by the county of location. Box shading under the corresponding contaminant for which a violation was incurred represents violations.

Data Tables 9 and 10 reveal inorganic contaminant nitrate monitoring violations. The data has been categorized in accordance with the type of source water supply utilized for ease of reference. Data Table 9 reveals those water systems, utilizing a surface water supply, which have incurred a monitoring violation regarding nitrate. Data Table 10 reveals those systems, utilizing a ground water supply, which have incurred a monitoring violation regarding nitrate, nitrite and total nitrate/nitrite.

**Inorganic Contaminants
Significant Monitoring Violations**

January 1, 2000 through December 31, 2000

■ Significant Monitoring

<u>System Name</u>	<u>County</u>	<u>Population</u>	Arsenic	Barium	Cadmium	Chromium	Cyanide	Fluoride	Mercury	Nickel	Selenium	Antimony	Beryllium	Thallium	Asbestos
* CEDAR CREEK HOME OWNERS ASSOC.	GREENE	98		■	■	■	■	■	■	■	■	■	■	■	■
* COUNTRY VALLEY ESTATES	MADISON	50	■	■	■	■	■	■	■	■	■	■	■	■	■
	Total Systems	2													
	Total Population	148													
	Total Violations	23													

* Inactive Water System
TN DWS (May 2001)

**Nitrate
Significant Monitoring Violations
Surface Water Systems**

January 1, 2000 through December 31, 2000

 Significant Monitoring

<u>System Name</u>	<u>County</u>	<u>Population</u>	<u>Monitoring Period</u>	<u>Date Returned to Compliance</u>
OLIN CORPORATION	BRADLEY	750	January through March	02/22/2001
PLEASANT VIEW UTILITY DISTRICT	CHEATHAM	10,750	January through March	05/09/2000
	Total Systems	2		
	Total Population	11,500		
	Total Violations	2		

* Inactive Water System
TN DWS (May 2001)

Table 10

**Nitrate, Nitrite, Total Nitrate/Nitrite
Significant Monitoring Violations
Ground Water Systems**

January 1, 2000 through December 31, 2000

 Significant Monitoring

<u>System Name</u>	<u>County</u>	<u>Population</u>	<u>Nitrate</u>	<u>Nitrite</u>	<u>Total Nitrate/ Nitrite</u>	<u>Date Returned to Compliance</u>
BI-LO #24	GRAINGER	25				02/19/2001
BI-LO #32	GRAINGER	75				02/19/2001
CHEROKEE MARKET & DELI	GRAINGER	25				
COCHRAN'S LAKEVIEW CAMPGROUND	SULLIVAN	45				03/14/2001
* COUNTRY VALLEY ESTATES	MADISON	50				
CUMBERLAND MTN RETREAT	CUMBERLAND	107				
DRY BRANCH WATER SYSTEM	BENTON	42				02/21/2001
FRENCH BROAD BAPTIST CHURCH	JEFFERSON	40				
GREENBRIAR RESTAURANT	SEVIER	100				02/12/2001
HOLLOW ROCK WATER DEPT	CARROLL	875				03/05/2001
Entry Point B						03/05/2001
Entry Point C						
KEITH SPRINGS MARKET	FRANKLIN	30				01/30/2001
MIDDLETON WATER DEPT	HARDEMAN	1,040				02/13/2001
NEW HOPE CHURCH OF CHRIST	WILLIAMSON	65				02/19/2001
OUTDOOR RESORTS @ GATLINBURG	SEVIER	700				01/17/2001
OUTDOOR RESORTS @ GATLN-OFFICE	SEVIER	450				01/17/2001
RICHLAND WATER DIST ASSOC	HUMPHREYS	50				01/15/2001
RIVER'S WAY CAMPGROUND	SULLIVAN	35				01/08/2001
STARDUST MARINA	ANDERSON	220				
STERCHI LODGE	COCKE	60				
THUNDERBIRD CAFE	COCKE	25				01/11/2001
TN CUMBERLAND PLATEAU CAMPGRD	BLEDSON	96				
TREASURE ISLAND FAMILY RESTAUR	SULLIVAN	50				03/14/2001
WALNUT GROVE BAPTIST CHURCH	MEIGS	60				03/13/2001
WARDS GROVE BAPTIST CHURCH	MADISON	30				06/11/2001
WHITEWAY GRILL	CARTER	25				03/07/2001
WILDWOOD ESTATES	HUMPHREYS	64				
Total Systems		26				
Total Violations		30				
Total Population		4,384				

* Inactive Water System
TN DWS (May 2001)

ORGANIC CONTAMINANTS VIOLATIONS DATA INTERPRETATION AND GUIDANCE

Organic contaminant sampling is conducted by all community, and certain non-community, public water systems in Tennessee, which have not received a waiver of the monitoring requirements, in an effort to detect any organic contaminants such as solvents or pesticides which may be present in the drinking water. Maximum contaminant levels have been established for organic contaminants and monitoring determines compliance with such standards. Monitoring intervals for organic contaminants are determined considering the type of source water utilized and the type of population served by the public water system. Water systems that conduct monitoring for organic contaminants and do not detect a contaminant may reduce the sampling frequency regarding organic contaminants or request a waiver from the State regarding sampling requirements.

The accompanying data reveals those public water systems within the State of Tennessee which have incurred a violation pertaining to organic contaminants monitoring. The data reveals public water systems that had not received a waiver of monitoring requirements and failed to conduct the required monitoring. During the 2000 calendar year, there were no public water systems in Tennessee that incurred a maximum contaminant level violation regarding organic contaminants. To facilitate ease of use, the data has been categorized according to type of organic contaminant. Data Table 11 contains a listing of Synthetic Organic Contaminants while Data Table 12 details information pertaining to Volatile Organic Contaminants. In referencing the data tables, the public water systems that have incurred monitoring violations are listed accompanied by the county of location. Organic contaminants that required monitoring are listed with violations being represented by box shading under the corresponding contaminant for which a monitoring violation was incurred. In addition to the above information, Data Table 12 reveals the compliance monitoring period during which the monitoring violation was incurred.

Table 12

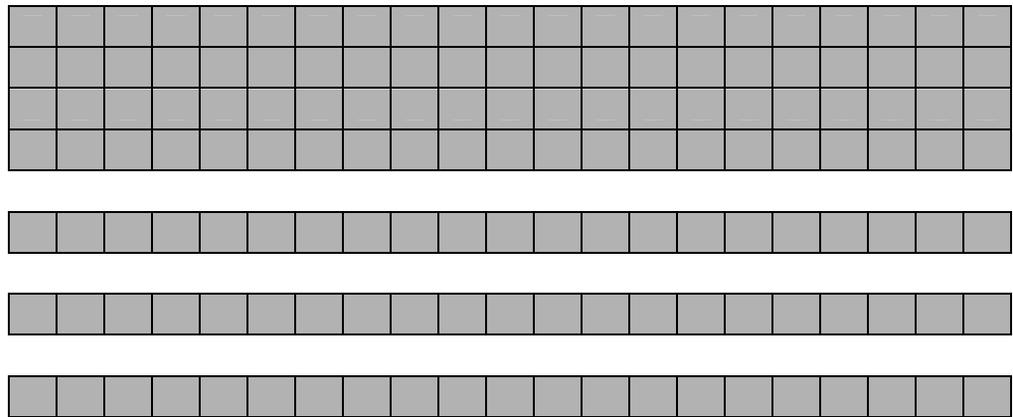
**Volatile Organic Contaminants
Significant Monitoring Violations**

January 1, 2000 through December 31, 2000

 Significant Monitoring Violation

- 1,2,4-TRICHLOROBENZENE
- CIS-1,2-DICHLOROETHYLENE
- XYLENES (total)
- DICHLOROMETHANE
- O-DICHLOROBENZENE
- P-DICHLOROBENZENE
- VINYL CHLORIDE
- 1,1-DICHLOROETHYLENE
- TRANS-1,2-DICHLOROETHYLENE
- 1,2-DICHLOROETHANE
- 1,1,1-TRICHLOROETHANE
- CARBON TETRACHLORIDE
- 1,2-DICHLOROPROPANE
- TRICHLOROETHYLENE
- 1,1,2-TRICHLOROETHANE
- TETRACHLOROETHYLENE
- CHLOROBENZENE
- BENZENE
- TOLUENE
- ETHYLBENZENE
- STYRENE

<u>System Name</u>	<u>County</u>	<u>Population</u>
* CEDAR CREEK HOME OWNERS ASSOC.	GREENE	98
January - March 2000		
April - June 2000		
July - September 2000		
October - December 2000		
* COUNTRY VALLEY ESTATES	MADISON	50
January - December 2000		
SMYRNA WATER SYSTEM ⁽¹⁾	RUTHERFORD	25,119
January - December 2000		
WILDWOOD ESTATES	HUMPHREYS	64
January - December 2000		
Total Systems		4
Total Violations		147
Total Population		25,331



Notes:
(1) System sampled 1/3/2001, and has Returned to Compliance

* Inactive Water System
TN DWS (May 2001)

TRIHALOMETHANE VIOLATIONS DATA INTERPRETATION AND GUIDANCE

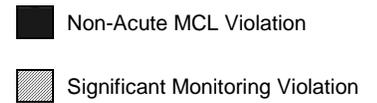
Trihalomethane sampling is conducted by all community public water systems in Tennessee which serve a population of 10,000 or more individuals and add a disinfectant to the water. Trihalomethanes are disinfection by-products that are produced as the disinfectant (chlorine) reacts with naturally occurring organic matter, such as leaf litter, which may be present in the water. Monitoring is conducted in an effort to detect any trihalomethanes that may be present in the drinking water. A maximum contaminant level has been established for total trihalomethanes and monitoring determines compliance with such standard. Monitoring is conducted for total trihalomethanes on a quarterly basis and on each water treatment plant used by a system.

The accompanying data reveals those public community water systems within the State of Tennessee which have incurred a violation pertaining to total trihalomethanes monitoring. One public water system in Tennessee incurred a maximum contaminant level violation regarding total trihalomethanes during the 2000 calendar year. In referencing Data Table 13 for total trihalomethanes, the public water systems that have incurred either a maximum contaminant level or significant monitoring violations are listed accompanied by the county of location. The data is segregated according to quarterly compliance monitoring periods with violations being represented by box shading under the corresponding compliance period during which a violation was incurred. Light colored shading indicates that monitoring was not performed and dark colored shading indicates a maximum contaminant level violation during the applicable monitoring periods.

Table 13

**Total Trihalomethane
Significant Monitoring Violations**

January 1, 2000 through December 31, 2000



<u>System Name</u>	<u>County</u>	<u>Population</u>	January February March	April May June	July August September	October November December
ATHENS UTILITIES BOARD ⁽¹⁾	MCMINN	16774				
CUMBERLAND UTILITY DISTRICT ⁽²⁾	ROANE	9796				
SELMER WATER SYSTEM ⁽³⁾	MCNAIRY	16802				
Total Systems		3				
Total Population		43372				
Total Violations		4				

Notes:

- (1) System has returned to compliance with samples taken 11/14/2000
- (2) System supplies water to multiple water systems totaling more than 10,000 customers, and has returned to compliance with an annual average below the MCL with samples taken during the fourth quarter of 2000.
- (3) System has returned to compliance with samples taken 3/27/2001.

* Inactive Water System
TN DWS (May 2001)

LEAD AND COPPER VIOLATIONS DATA INTERPRETATION AND GUIDANCE

Lead and Copper sampling is conducted by all community and certain non-community public water systems in Tennessee in an effort to detect excessive levels of lead and/or copper in drinking water. The maximum allowable concentrations of lead and/or copper in drinking water are denoted as action levels. Treatment techniques have been established that include requirements for corrosion control treatment, source water treatment, lead service line replacement and public education for systems which exceed the action levels for lead and/or copper. Tap water monitoring determines compliance with such standards. Initial tap water monitoring is conducted for lead and copper on six (6) month monitoring intervals. If a water system meets the action levels for lead and copper during each of two (2) consecutive six (6) month monitoring periods, or maintains optimal corrosion control, the system may request to reduce monitoring to an annual basis.

The accompanying data reveals those public water systems within the State of Tennessee which have incurred a violation pertaining to lead and copper monitoring. In referencing Data Table 14 for lead and copper monitoring, the public water systems that have incurred monitoring violations are listed accompanied by the county of location. The monitoring period during which the violation was incurred is also noted within the data table.

Table 14

**Lead and Copper
Significant Monitoring Violations**

January 1, 2000 through December 31, 2000

<u>System Name</u>	<u>County</u>	<u>Population</u>	<u>Violation Type</u>	<u>Monitoring Period</u>
* CEDAR CREEK HOME OWNERS ASSOC.	GREENE	98	Initial Monitoring	January - June
* COUNTRY VALLEY ESTATES	MADISON	50	Initial Monitoring	January - June
			Initial Monitoring	July - December
	Total Systems	2		
	Total Population	148		
	Total Violations	3		

CONSUMER CONFIDENCE REPORT VIOLATIONS DATA INTERPRETATION AND GUIDANCE

Beginning in 1998 public water systems were required to furnish a report to each of its customers with certain information about the water being furnished to the public. Included in this report is the source of water for the local water utility, certain health effects language, information concerning contaminants detected, and information on violations that may have occurred during the calendar year. There is also information on the time and location of any board meetings so the public can participate in the decision making process of the water utility.

All systems serving 10,000 or more persons are required to furnish an individual copy of the report to each water user. Systems serving less than 10,000 persons are given the option to notify their customers that the report will be published in a newspaper serving the local area. Even though the report is published in the paper, the water utility is required to furnish an individual copy of the report to any person requesting a copy.

Twelve water systems incurred a violation on July 1, 2000, by failing to provide a copy of the report to the state or to their customers by the required due date. All twelve water systems had returned to compliance by August 30, 2001.

Table 15

**Consumer Confidence Report Violations
January 1, 2000 through December 31, 2000**

<u>System Name</u>	<u>County</u>	<u>Population</u>	<u>Date Returned to Compliance</u>
ADAMSVILLE WATER SYSTEM	MCNAIRY	7,111	07/05/2000
BRIAR CLUB APARTMENTS	SHELBY	721	08/02/2000
CINNAMON TRAILS APARTMENTS	SHELBY	551	08/02/2000
DOGWOOD CREEK APARTMENTS	SHELBY	737	08/02/2000
HICKORY POINT APARTMENTS	SHELBY	636	08/02/2000
HUNTERS TRACE APARTMENTS	SHELBY	509	08/02/2000
LOBELVILLE WATER DEPT	PERRY	1,382	07/07/2000
MASON WATER DEPT	TIPTON	2,031	07/26/2000
MCEWEN WATER DEPARTMENT	HUMPHREYS	2,588	07/12/2000
MOWBRAY MOUNTAIN UTILITY DIST	HAMILTON	2,613	08/30/2000
THE TRAILS APARTMENTS	SHELBY	2,666	08/02/2000
WHISPERING PINES TRAILER COURT	MADISON	125	08/01/2000
	Total Systems	12	
	Total Population	21,670	
	Total Violations	12	

* Inactive Water System
TN DWS (May 2001)

RADIONUCLIDE VIOLATIONS DATA INTERPRETATION AND GUIDANCE

Public water systems are required to monitor for certain naturally occurring and man-made radionuclides to insure the water being provided to their customers meet standards. Radionuclide samples are collected every quarter with the results being the average of all the quarterly samples. Tennessee did not have any systems fail to meet the maximum contaminant level during the current reporting period. Eight water systems failed to take at least one of their quarterly samples and incurred a monitoring violation. All eight of these water systems have either returned to compliance or have been deactivated as a public water system.

Table 16

**Radionuclide
Significant Monitoring Violations**

January 1, 2000 through December 31, 2000

<u>System Name</u>	<u>County</u>	<u>Population</u>	<u>Monitoring Period</u>
* CEDAR CREEK HOME OWNERS ASSOC.	GREENE	98	October – December
COLONIAL HARBOR WATER SYSTEM	BLOUNT	30	October – December
* COUNTRY VALLEY ESTATES	MADISON	50	July – September October – December
COUNTY LINE TRAILER PARK	GIBSON	74	July – September
EAGLES REST WATER SYSTEM	STEWART	53	July – September
HOLSTON RIVER BEND UTILITY DIS	GRAINGER	40	October – December
JARRELL MHP	BEDFORD	35	July – September
MID HAWKINS COUNTY UTILITY DIS	HAWKINS	345	July – September
	Total Systems	8	
	Total Population	725	
	Total Violations	9	

* Inactive Water System
TN DWS (May 2001)

**DIVISION OF WATER SUPPLY
ENFORCEMENT ACTION
SUMMARY**

In order to address non-compliance issues the Division of Water Supply utilizes a number of enforcement mechanisms which include: issuance of Notices of Violation and/or Notices of Non-Compliance which officially notify a violator of a violation and provide guidance to facilitate actions to return a violator to compliance; technical assistance and training; conducting Compliance Review and/or Show Cause meetings during which compliance status is discussed and imperative actions to achieve compliance are reviewed; and issuance of administrative orders and assessments which contain monetary civil penalties for violations incurred. The Department of Environment and Conservation and the Division of Water Supply are granted authority by the Tennessee Safe Drinking Water Act, through the Department's Commissioner, to initiate enforcement action and issue such administrative orders regarding violations of the Tennessee Safe Drinking Water Act, T.C.A. § 68-221-701 *et seq.*

The Division of Water Supply initially attempts to assist violators with compliance through a system of official notifications, technical assistance and training, on-site inspections and compliance review meetings. Under certain circumstances, water systems are provided the opportunity to execute a Letter of Agreement indicating an understanding of non-compliance issues and conveying an agreement to undertake necessary actions to prevent a recurrence of non-compliance. In situations where the Division has issued notifications, conducted technical assistance and/or on-site inspections or conducted compliance assessment meetings and violations are not addressed by the water utility or are not addressed in a timely manner, enforcement action in the form of an Administrative Order is customarily recommended and/or initiated. Such Administrative Orders contain monetary civil penalties assessed for violations and mandate that compliance be achieved.

The majority of violations incurred by water utilities are addressed and corrected prior to the necessity for issuance of an Administrative Order. With technical assistance and training by the Division, most systems are able to return to compliance. However, there are situations in which violations are not addressed or corrected and an Administrative Order is warranted. Consequently, during calendar year 2000, forty-four (44) Administrative Orders were issued to public water systems and/or certified operators in Tennessee. The Administrative Orders encompassed a variety of violations including those contained in this Annual Report of Violations.